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EXAMINER

THANGAVELU, KANDASAMY

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 06/03/2003

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/356,260

Applicant(s)

EIZENHOEFER ET AL.

Examiner

Kandasamy Thangavelu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Introduction

1. This communication is in response to the Applicants' Request for Continuing Examination and Amendment dated May 9, 2003. Claims 1, 3, 4, 6, 9, 11, 12, 15 and 17 were amended. Claims 1-19 of the application are pending.

Response to Amendments

2. Applicants' arguments filed on May 9, 2003 have been fully considered. Applicants' arguments filed on May 9, 2003 under 35 U.S.C. 102 (e) and 35 U.S.C. 103 (a) are not persuasive. The examiner's reasoning is presented in this office action. This office action is made non-final based on the request for continued examination (RCE).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1-2, 7-10 and 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by **Balachandran et al. (BA)** (US Patent 5,881,105).

4.1 **BA** teaches a system and method for the non-sequential transmission of control signals within a speech transmission. Specifically, as per Claim 1, **BA** teaches a method for signaling of information in a frame based transmission system, whereat the signaling information contains information necessary for the operation of the transmission system (Fig. 1; Col 3, Lines 34-66; Col 1, Line 65 to Col 2, Line 24); characterized by steps of

inserting signaling information related to individual frames into the individual frames (Col 3, Lines 45-47 and Col 3, lines 60-66); the synchronization word inserted in each slot is related to that slot and to that frame and provides for frame synchronization; and

partitioning the signaling information and inserting the partitioned signaling information into frames other than the individual frames (Col 4, Lines 3-11 and Col 3, lines 60-66; Col 2, Lines 45-66); the FACCH carries the control signals which are 184 bits; the FACCH signals become 456 bits long after encoding; these are split into 8 bursts and sent through 8 separate frames; the FACCH carries the control signals in frames in which the user data/speech for the same user is not carried (Col 2, Lines 45-66).

4.2 As per Claim 2, **BA** teaches the method of Claim 1, as discussed above. **BA** also teaches that the inserted signaling information and the inserted partitioned signaling information are

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synchronized by using the given synchronization of the frame based transmission system (Col 3, Lines 45-47 and Col 3, lines 60-66).

4.3 As per Claim 7, **BA** teaches the method of Claim 1, as discussed above. **BA** also teaches that the transmission system is a radio network system (Fig. 3).

4.4 As per Claim 8, **BA** teaches the method of Claim 7, as discussed above. **BA** also teaches that radio network system is a GSM system (Col 1, Lines 34-37 and Col 3, lines 34-37).

4.5 As per Claim 9, **BA** teaches a frame based transmission system for signaling of information, whereat the signaling information contains information necessary for the operation of the transmission system, having means for coding and decoding of data, means for handling, the coded data in frame format, and means for transmitting and receiving the frames (Fig. 1; Col 3, Lines 34-66; Col 1, Line 65 to Col 2, Line 24); characterized by

means for inserting and evaluating signaling information into and from individual frames related to the individual frames (Col 3, Lines 45-47 and Col 3, lines 60-66); the synchronization word inserted in each slot is related to that slot and to that frame and provides for frame synchronization; and

means for partitioning signaling information and inserting and evaluating the partitioned information into and from frames other than the individual frames (Col 4, Lines 3-11 and Col 3, lines 60-66; Col 2, Lines 45-66); the FACCH carries the control signals which are 184 bits; the FACCH signals become 456 bits long after encoding; these are split into 8 bursts and sent

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through 8 separate frames; the FACCH carries the control signals in frames in which the user data/speech for the same user is not carried (Col 2, Lines 45-66).

4.6 As per Claim 10, **BA** teaches the system of Claim 9, as discussed above. **BA** also teaches that means for synchronizing are used to synchronize the inserted signaling information and the inserted partitioned signaling information according to the given synchronization of the frame based transmission system (Col 3, Lines 45-47 and Col 3, lines 60-66).

4.7 As per Claim 13, **BA** teaches the system of Claim 9, as discussed above. **BA** also teaches that the transmission system is a radio network system (Fig. 3).

4.8 As per Claim 14, **BA** teaches the system of Claim 13, as discussed above. **BA** also teaches that radio network system is a GSM system (Col 1, Lines 34-37 and Col 3, lines 34-37).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 3-4 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Balachandran et al. (BA)** (US Patent 5,881,105), in view of **Le Strat et al. (LS)** (US Patent 6,134,220).

7.1 As per Claim 3, **BA** teaches a method for signaling of information in a frame based transmission system, whereat the signaling information contains information necessary for the operation of the transmission system (Fig. 1; Col 3, Lines 34-66; Col 1, Line 65 to Col 2, Line 24); characterized by steps of

inserting signaling information related to individual frames into the individual frames (Col 3, Lines 45-47 and Col 3, lines 60-66); the synchronization word inserted in each slot is related to that slot and to that frame and provides for frame synchronization; and partitioning signaling information and inserting the partitioned signaling information into frames other than the individual frames (Col 4, Lines 3-11 and Col 3, lines 60-66; Col 2, Lines 45-66); the FACCH carries the control signals which are 184 bits; the FACCH signals become 456 bits long after encoding; these are split into 8 bursts and sent through 8 separate frames; the FACCH

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carries the control signals in frames in which the user data/speech for the same user is not carried (Col 2, Lines 45-66).

BA does not teach that the signaling information and the partitioned signaling information indicate coding mode used for coding and decoding data in the transmission system. **LS** teaches that the signaling information and the partitioned signaling information indicate coding mode used for coding and decoding data in the transmission system (Fig. 9; Col 7, Lines 40-42 and Col 14, Lines 60-63), so the coding mode could be selected to reduce the resources used to transmit a service and increase the number of calls per cell (Col 3, Lines 13-16) and to optimize the transmission quality (Col 7, Lines 16-19); **LS** specifies that the coding mode is sent through ~~FACCH~~ ^{FACCH}; since **BA** teaches that FACCH is sent in successive frames, the coding mode could be sent in one frame or partitioned and sent in successive frames. It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to combine the method of **BA** with the method of **LS** so signaling information and the partitioned signaling information indicate coding mode used for coding and decoding data in the transmission system, so the coding mode could be selected to reduce the resources used to transmit a service and increase the number of calls per cell and to optimize the transmission quality.

7.2 As per Claim 4, **BA** teaches the method of Claim 1, as discussed above. **BA** does not teach that the inserted signaling information related to individual frames indicates a coding mode used for coding and decoding data in the transmission system. **LS** teaches that the inserted signaling information related to individual frames indicates a coding mode used for coding and decoding data in the transmission system (Fig. 9; Col 7, Lines 40-42 and Col 14, Lines 60-63), as

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the coding mode used depends on the quality of transmission required and the resources required (Col 4, Lines 41-50). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to combine the method of **BA** with the method of **LS**, so that the inserted signaling information related to individual frames indicates a coding mode used for coding and decoding data in the transmission system, as the coding mode used would depend on the quality of transmission required and the resources required.

BA does not teach that the partitioned signaling information inserted into different frames of the uplink is a quality measurement for the transmission. **LS** teaches that the partitioned signaling information inserted into different frames of the uplink is a quality measurement for the transmission (Col 7, Lines 44-48 and Col 14, Lines 60-63), as the quality information is used to select the coding mode to be used (Col 7, Lines 30-38). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to combine the method of **BA** with the method of **LS**, so the partitioned signaling information inserted into different frames of the uplink is a quality measurement for the transmission, as the quality information would be used to select the coding mode to be used.

BA does not teach that the partitioned signaling information inserted into frames other than the individual frames of the downlink indicates a coding mode used for coding and decoding data in the transmission system. **LS** teaches that the partitioned signaling information inserted into frames other than the individual frames of the downlink indicates a coding mode used for coding and decoding data in the transmission system (Col 7, Lines 40-42 and Col 14, Lines 60-63), so the coding mode could be selected to reduce the resources used to transmit a service and increase the number of calls per cell (Col 3, Lines 13-16) and to optimize the

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transmission quality (Col 7, Lines 16-19). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to combine the method of **BA** with the method of **LS**, so the partitioned signaling information inserted into frames other than the individual frames of the downlink indicates a coding mode used for coding and decoding data in the transmission system, so the coding mode could be selected to reduce the resources used to transmit a service and increase the number of calls per cell and to optimize the transmission quality.

7.3 As per Claim 15, **BA** teaches the system of Claim 9, as discussed above. **BA** does not teach that the signaling information provided by the means for inserting and evaluating signaling information into and from individual frames and the signaling information provided by the means for partitioning signaling information and inserting and evaluating the partitioned information into and from other than the individual frames indicate coding modes used by the means for coding and decoding. **LS** teaches that the signaling information provided by the means for inserting and evaluating signaling information into and from individual frames and the signaling information provided by the means for partitioning signaling information and inserting and evaluating the partitioned information into and from other than the individual frames indicate coding modes used by the means for coding and decoding (Col 7, Lines 40-42 and Col 14, Lines 60-63), so the coding mode could be selected to reduce the resources used to transmit a service and increase the number of calls per cell (Col 3, Lines 13-16) and to optimize the transmission quality (Col 7, Lines 16-19). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the system of **BA** with the method of **LS** that included the signaling information provided by the means for inserting and evaluating

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signaling information into and from individual frames and the signaling information provided by the means for partitioning signaling information and inserting and evaluating the partitioned information into and from other than the individual frames indicating coding modes used by the means for coding and decoding, so the coding mode could be selected to reduce the resources used to transmit a service and increase the number of calls per cell and to optimize the transmission quality.

7.4 As per Claim 16, **BA** and **LS** teach the system of Claim 15, as discussed above. **BA** does not teach that the system is a fixed part of the radio network system. **LS** teaches that the system is a fixed part of the radio network system (Col 7, Lines 28-29), as the fixed part of the system transmits to the mobile station information representative of the coding mode (Col 7, Lines 40-42). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the system of **BA** with the signaling information in the fixed part of **LS**, as the fixed part of the system transmits to the mobile station information representative of the coding mode.

7.5 As per Claim 17, **BA** teaches the system of Claim 9, as discussed above. **BA** does not teach that the signaling information provided by the means for inserting and evaluating signaling information into and from individual frames indicates coding modes used by the means for coding and decoding. **LS** teaches that the signaling information provided by the means for inserting and evaluating signaling information into and from individual frames indicates coding modes used by the means for coding and decoding (Col 14, Lines 60-63), so the coding mode

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could be selected to reduce the resources used to transmit a service and increase the number of calls per cell (Col 3, Lines 13-16) and to optimize the transmission quality (Col 7, Lines 16-19).

It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the system of **BA** with the system of **LS** that included the signaling information provided by the means for inserting and evaluating signaling information into and from individual frames indicating coding modes used by the means for coding and decoding, so the coding mode could be selected to reduce the resources used to transmit a service and increase the number of calls per cell and to optimize the transmission quality.

BA does not teach that the signaling information provided by the means for partitioning signaling information and inserting and evaluating the partitioned information into and from other than the individual frames indicates a quality measurement for transmission. **LS** teaches that the signaling information provided by the means for partitioning signaling information and inserting and evaluating the partitioned information into and from other than the individual frames indicates a quality measurement for transmission (Col 7, Lines 44-48 and Col 14, Lines 60-63), as the quality information is used to select the coding mode to be used (Col 7, Lines 33-38). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the system of **BA** with the system of **LS** that included the signaling information provided by the means for partitioning signaling information and inserting and evaluating the partitioned information into and from other than the individual frames indicating a quality measurement for transmission, as the quality information would be used to select the coding mode to be used.

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7.6 As per Claim 18, **BA** and **LS** teach the system of Claim 17, as discussed above. **BA** does not teach that the system is a mobile part of the radio network system. **LS** teaches that the system is a mobile part of the radio network system (Col 7, Line 43), as the mobile part of the system transmits to the fixed part of the system, indication of transmission quality from base station to the mobile station (Col 7, Lines 44-48). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the system of **BA** with the system of **LS** that included the signaling information indicating coding mode used for coding and decoding data and the quality measurement information, as the mobile part of the system transmits to the fixed part of the system, indication of transmission quality from base station to the mobile station.

7.7 As per Claim 19, **BA** and **LS** teach the system of Claim 18, as discussed above. **BA** does not teach that the quality measurement for transmission is evaluated by the mobile part of the radio network system, based on frames received from the fixed part of the radio network system. **LS** teaches that the quality measurement for transmission is evaluated by the mobile part of the radio network system, based on frames received from the fixed part of the radio network system (Col 7, Lines 44-46), as the quality information can then be sent to the fixed part for modifying the coding mode (Col 7, Lines 33-38). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the system of **BA** with the system of **LS** that made the quality measurement for transmission by the mobile part of the radio network system, based on frames received from the fixed part of the radio network system, as the quality information could then be sent to the fixed part for modifying the coding mode.

8. Claims 5, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Balachandran et al. (BA)** (US Patent 5,881,105), in view of **Dahlin (DA)** (US Patent 5,199,031).

8.1 As per Claim 5, **BA** teaches the method of Claim 1, as discussed above. **BA** does not teach that the inserted signaling information related to individual frames is channel coded separately. **DA** teaches that the inserted signaling information related to individual frames is channel coded separately (Fig. 2, Items 102 and 104; Col 4, Lines 14-35), as that allows manipulating the incoming data to carry out error detection and correction (Col 4, Lines 25-29). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the method of **BA** with the method of **DA**, so that the inserted signaling information related to individual frames is channel coded separately, as that would allow manipulating the incoming data to carry out error detection and correction.

8.2 As per Claim 11, **BA** teaches a frame based transmission system for signaling of information, whereat the signaling information contains information necessary for the operation of the transmission system, having means for coding and decoding of data, means for handling, the coded data in frame format, and means for transmitting and receiving the frames (Fig. 1; Col 3, Lines 34-66; Col 1, Line 65 to Col 2, Line 24); characterized by

means for inserting and evaluating signaling information into and from individual frames related to the individual frames (Col 3, Lines 45-47 and Col 3, lines 60-66); the synchronization

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word inserted in each slot is related to that slot and to that frame and provides for frame synchronization; and

means for partitioning signaling information and inserting and evaluating the partitioned information into and from frames other than the individual frames (Col 4, Lines 3-11 and Col 3, lines 60-66; Col 2, Lines 45-66); the FACCH carries the control signals which are 184 bits; the FACCH signals become 456 bits long after encoding; these are split into 8 bursts and sent through 8 separate frames; the FACCH carries the control signals in frames in which the user data/speech for the same user is not carried (Col 2, Lines 45-66).

BA does not teach that means for channel coding and decoding are used to channel code and decode the signaling information provided by the means for inserting and evaluating signaling information into and from individual frames. **DA** teaches that means for channel coding and decoding are used to channel code and decode the signaling information provided by the means for inserting and evaluating signaling information into and from individual frames (Fig. 2, Items 102 and 104; Col 4, Lines 14-35), as that allows manipulating the incoming data to carry out error detection and correction (Col 4, Lines 25-29). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the system of **BA** with the system of **DA**, so that means for channel coding and decoding are used to channel code and decode the signaling information provided by the means for inserting and evaluating signaling information into and from individual frames, as that would facilitate manipulating the incoming data to carry out error detection and correction.

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8.3 As per Claim 12, **BA** teaches the system of Claim 9, as discussed above. **BA** does not teach that the means for channel coding are used to channel code and decode the signaling information provided by the means for partitioning signaling information and inserting and evaluating the partitioned information into and from other than the individual frames. **DA** teaches that the means for channel coding are used to channel code and decode the signaling information provided by the means for partitioning signaling information and inserting and evaluating the partitioned information into and from other than the individual frames (Fig. 2, Items 102 and 104; Col 4, Lines 14-35), as that allows manipulating the incoming data to carry out error detection and correction (Col 4, Lines 25-29). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the system of **BA** with the system of **DA**, so that the means for channel coding are used to channel code and decode the signaling information provided by the means for partitioning signaling information and inserting and evaluating the partitioned information into and from other than the individual frames, as that would facilitate manipulating the incoming data to carry out error detection and correction.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Balachandran et al. (BA)** (US Patent 5,881,105), in view of **Dahlin (DA)** (US Patent 5,199,031), and further in view of **Alanara (AL)** (US Patent 6,286,122).

9.1 As per Claim 6, **BA** teaches the method of Claim 1, as discussed above. **BA** does not teach that that the partitioned signaling information inserted into different frames is channel coded together with data contained in the different frames. **AL** teaches that the data word and

signal word could be interleaved and sent in one slot (Col 4, Lines 22-27), so unused portion of a slot containing signaling word could be used to transmit data word (Col 4, Lines 22-27). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the method of **BA** with the method of **AL**, so that the data word and signal word could be interleaved and sent in one slot, as that would facilitate using unused portion of a slot containing signaling word to transmit data word.

DA teaches that the information inserted into different frames is channel coded together with data contained in the different frames (Fig. 2, Items 102 and 104; Col 4, Lines 14-35), as that allows manipulating the incoming data to carry out error detection and correction (Col 4, Lines 25-29). It would have been obvious to one of ordinary skill in the art at the time of the Applicants' invention to modify the method of **BA** and **AL** with the method of **DA**, so that the partitioned signaling information inserted into different frames is channel coded together with data contained in the different frames, as that would facilitate manipulating the incoming data to carry out error detection and correction.

Applicants' Arguments

10. The applicant argues the following:

(1) a word of signaling information is inserted not only into the individual frames to which it is related, but also having been partitioned into frames other than those individual frames; this allows error checking of the received code word by comparison with a code word determined from three previous frames; transmitting the code word in this way provides the advantages of highly protected and highly reliable signaling requiring minimum number of bits

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and easy detection of signaling bits; neither BA nor LS nor a combination of the teachings of the two documents suggests a transmission of the signaling information in this way;

(2) BA does not suggest that the same signaling information should be inserted into both the frames to which it relates and into other frames; BA describes insertion of synchronizing bits into a transmission burst and interleaving of control signals in the FACCH; thus BA describes inserting signaling information into the frames to which the information relates and partitioning and inserting other, different signaling information; there is no suggestion in BA that the two steps should be carried out with respect to the same signaling information as required by the applicants' claims; and

(3) in BA and LS there is no suggestion that the coding mode or indeed any signaling information , should be transmitted in two ways specified in the present claims 1 and 3.

Examiner's reply

11. As per the Applicants' arguments, the Applicants' attention is requested to the corresponding claim rejections. In addition, the following explanation is provided to further explain the examiner's position.

11.1 In response to the Applicants' argument that "a word of signaling information is inserted not only into the individual frames to which it is related, but also having been partitioned into frames other than those individual frames; this allows error checking of the received code word by comparison with a code word determined from three previous frames; transmitting the code word in this way provides the advantages of highly protected and highly reliable signaling

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requiring minimum number of bits and easy detection of signaling bits; neither BA nor LS nor a combination of the teachings of the two documents suggests a transmission of the signaling information in this way”, the examiner request the applicants attention to the fact that claim 1 and other independent claims only state that:

inserting signaling information related to individual frames into the individual frames,
and

partitioning the signaling information and inserting the partitioned signaling information into frames other than the individual frames.

The independent claims do not state that the signaling information in the individual frames and the partitioned signaling information in other than individual frames are same or related. So the examiner has given wide interpretation of the limitations and assumed that the signaling information in the individual frames and the partitioned signaling information in other than individual frames could be different signaling information.

11.2 In response to the Applicants’ argument that “BA does not suggest that the same signaling information should be inserted into both the frames to which it relates and into other frames; BA describes insertion of synchronizing bits into a transmission burst and interleaving of control signals in the FACCH; thus BA describes inserting signaling information into the frames to which the information relates and partitioning and inserting other, different signaling information; there is no suggestion in BA that the two steps should be carried out with respect to the same signaling information as required by the applicants’ claims”, the examiner respectfully disagrees. As explained in Paragraph 11.1 above, the independent claims do not specify that the

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signaling information in the individual frames and signaling information in other than individual frames are related. The examiner requests the applicants' attention to the fact that the specification Figure 2, shows that the signaling information in the individual frames is ***actual coding mode*** used for that frame and the partitioned signaling information in other than the individual frames is ***future coding mode*** in the downlink frames and ***quality measurement*** information in the uplink frames. So the information in the individual and other than the individual frames are not the same.

11.3 In response to the Applicants' argument that "in BA and LS there is no suggestion that the coding mode or indeed any signaling information, should be transmitted in two ways specified in the present claims 1 and 3", the examiner has identified with reference to Claim 1 and other independent claims that BA teaches two ways of transmitting signaling information. However, since the applicants have not claimed that the same information is transmitted in both ways, the examiner has assumed that different signaling information could be transmitted using the two ways.

Conclusion

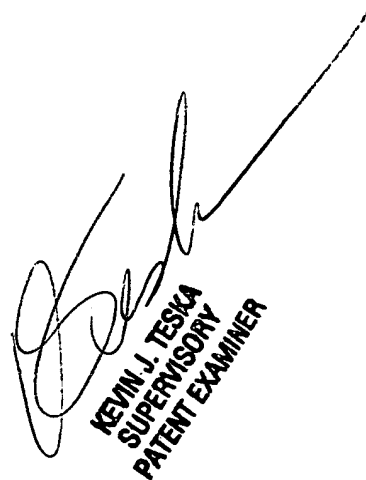
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 703-305-0043. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska, can be reached on (703) 305-9704. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7329.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

K. Thangavelu
Art Unit 2123
March 30, 2003



KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER